

Amendments to the Claims:



1. (Currently Amended) A method for decoding a video stream,
comprising:

~~maintaining a DCT bit stream table in a storage medium, wherein the
DCT reference bit stream table includes pairs composed of DCT reference bit
streams and block pixel data, the block pixel data providing inverse DCT
information of the corresponding DCT reference bit stream;~~

saving the coming block of compressed video to the first on-chip
temporary storage device, applying the variable length decoding method to
decode the video bit stream and block by block recovering the DCT
coefficients and dequantizing the coefficient by multiplying the quantization
table and inverse transforming the DCT coefficients to matrix of pixel values;

saving the decompressed block of pixels into the second on-chip
temporary storage device;

~~looking up the DCT bit stream table when receiving a VLD decoded
DCT input stream to find whether the new DCT coefficient matrix matches a
DCT coefficient matrix; and~~

~~utilizing the block pixel data corresponding to the matched DCT
coefficient bit stream to generate inverse DCT data of the DCT input bit~~

~~stream if the DCT bit stream table includes the matched DCT coefficient bit stream.~~

looking up the incoming compressed block of video stream to the blocks of compressed pixel data saved in the first temporary storage device and calculating whether any of the previous block is equivalent to the coming block; and

if a “Match” happens:

utilizing the block pixel data saved in the second temporary storage device corresponding to the matched block of bit stream to represent the block of decompressed bit stream.

otherwise, decompressing the block of bit stream according to the normal decompression procedure.

2. (Currently Amended) The method of claim 1, further comprising the steps of decoding the DCT bit stream and saving the decoded result of block of pixels into the second temporary storage device and saving the DCT coefficients into the first temporary storage device ~~if the DCT input stream the compressed block fails to match any DCT block reference bit stream in the DCT bit stream table of the previous blocks.~~

3. (Currently Amended) The method of claim 2, further comprising the step of ~~compressing the decoded result saved in the DCT bit stream~~ saving the decompressed result of DCT bit stream into an on-chip second temporary buffer.
4. (Currently Amended) The method of claim 1, wherein the coming DCT reference input bit stream ~~and the DCT reference bit stream are matched~~ one of the previous blocks of DCT coefficients are identical, then, the previously decoded block of pixels is used to represent the coming block.
5. (Currently Amended) The method of claim 1, wherein the DCT input bit stream and the DCT reference bit stream are matched if a difference of between the DCT input bit stream and the DCT reference bit stream is lower than a predetermined ~~threshold~~ tolerance.
6. (Currently Amended) The method of claim 1, further comprising a step of representing a target block with a decompressed block pixels² within neighboring blocks if a compressed stream of the previously saved block ~~streams~~ in the first

temporary storage device is identical to a the target block stream.

7. (Original) The method of claim 1, wherein a threshold value is compared to a weighted difference of compressed DCT coefficients of at least one previously saved block and a target block for determining the similarity.

8. (Original) The method of claim 7, wherein a weighted difference between at least one previously saved block stream and a target block stream is applied to determine whether a lossy decoding is applied in decompressing the video bit stream.

9. (Original) The method of claim 8, wherein one of previously saved decoded blocks is selected to represent a target block if a weighted sum of DCT coefficient difference between a target block and the closest block saved in the storage is less than a predetermined threshold;

10. (Cancelled)

11. (Currently Amended) The method of claim 1, wherein a block of

decompressed bit stream is compressed before being stored to the second temporary storage a-buffer for future representing new targeted block stream.

12. (Currently amended) The method of claim 1, wherein a block of decompressed bit stream is compressed through a lossless compression mechanism before being stored to ~~a-buffer~~ an on-chip secondary temporary buffer and is decompressed for future representing a new targeted block stream.

13. (Canceled)

14. (Canceled)

15. (Canceled)

16 (Currently Amended) An apparatus for decoding a video stream, comprising:
a bit stream decoding unit including a VLD, variable length deciding
and reconstructing the video bit stream to DCT matrix and a DeQuantization unit
multiplying the DCT matrix to inverse transforming and recovering the block of pixel

matrix;

a the first on-chip storage device for storing compressed video data stream and
the second on-chip storage device for storing the corresponding decompressed pixel
data of at least one previous block ;

a circuit ~~device~~ of comparing a coming compressed stream to at least
one previously saved stream; and

a circuit device of selecting one of previously saved decoded blocks to represent
a targeted block if a the targeted block is identical to one of the previously saved
blocks.

17. (Currently Amended) The apparatus of claim 16, wherein an output of
a comparator is used to select the decoded pixels stored in the on-chip second
temporary buffer to represent the target block pixels.

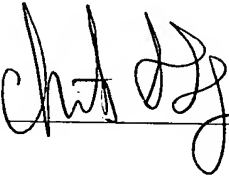
18. (Original) The apparatus of claim 16, wherein decoded block pixels
represent the target block pixels by copying the decoded block pixels.

19. (Canceled)

20. (Currently Amended) The apparatus of claim 13, wherein in decompressing an I-type frame ~~and~~ or a JPEG still pictures, one of previously decoded and saved blocks is selected to represent the target block.

21. (Canceled)

Respectfully submitted,

By:  Date: February 5th, 2009